Get to Know Public Health Services Data

Workshop I

Public Health Services,
Community Health Statistics
12/7/2010

Introduction

Leslie Upledger Ray, M.P.H., M.P.P.A., M.A.
Community Health Statistics (CHS) Unit

Today's Agenda

Today's training will help you learn more about the public health data available and how to access it

- Role of Public Health & CHS Unit
- Specific Public Health Services Databases
- Data Requests, Website Navigation
- Preview of Workshop II

Binder Information

- Copy of all slides presented today
- Database information sheets
- Quick reference slides: who, what, when, where
- Index (Databases by topic)
  - For each topic/indicator, see page number for relevant databases
  - Page number of primary data sources in bold
  - e.g. want data on diabetes:
    - See databases: Hospital, ED, Death, CHIS, YRBS
- Flyer for Public Health Data Requests

Thank You!

- Thank you for the positive response to this training - we hope to meet your needs and make this an informative and beneficial experience
- This training is a collaborative effort with representatives from all Public Health Services Branches - thank you for sharing your expertise

Community Health Statistics Unit Rationale & Mission

- This unit was established in August 2004 by Public Health Officer in response to community requests for one central office to access Public Health Services data, the "One Stop Shopping" approach
- To provide health data to meet the needs of community partners and Health & Human Services Agency (HHSA) staff.

Role of The Community Health Statistics (CHS) Unit

- "One Stop Shop" for health data
- Data Requests (619) 285-6479
- CHS Unit Website: www.SDHealthStatistics.com

Slides & Speaker Format

Since you'll be hearing from 20+ data analysts today, the slides for each presentation are formatted in the same way.

The speakers or data bases are divided into groups according to type of database.

Types of Databases

- Sample or Survey
  - Statistical sample
    - Representative of the population
    - Results can be applied to the population
  - Convenience sample
    - Not representative of the population
    - Easy to obtain
- Service
  - Client data
    - Results apply to your service population
    - May not apply to all population with specific illness/injury
- Population-based
  - Virtually everyone with the illness/injury is included
  - Inclusion varies by database
- Useful Non-Health Data
  - Demographic or Census
  - Law enforcement

Presentation Format

- Data background – basics about data, will only mention unusual items
- Example - Illustrative example of data use, sample of project using data
- Graph – of above
- Data Highlights – examples of other projects & uses of this data

Format Note - Data

Timing of Data Availability

- Collection and processing takes time

For example,

- Local processing may take 6 months
- State processing may take 2 years

- Most recent data may be several years old
- For many programs, periodic reports are available on program's website. More recent or additional data may be available by request.

Format Note - Examples

You'll hear an example of how the data was used in a special project and several other ways the data is used – to inspire you to use the data

Format Note – Q & A

Brief questions between speakers
In depth “ask an epidemiologist” Q & A at end

Q & A

Specific Databases

Useful Non-Health Data

SANDAG Demographic Data

Kirby Brady

SANDAG

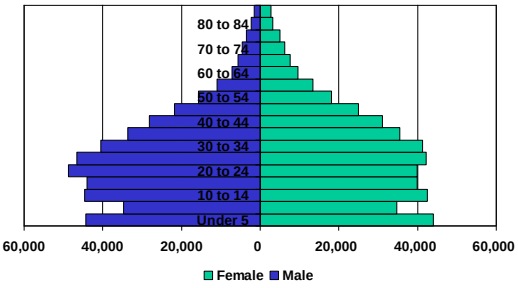
SANDAG Background

- San Diego Association of Governments
- Purpose of SANDAG
  - Forum for regional decision making
  - Provide population size and demographics to predict resource needs
  - Used to calculate rates which are necessary to compare health issues over time and to track population trends
- Types of programs SANDAG is involved in
  - Regional Transportation Plan, Criminal Justice Clearinghouse, Energy, Demographic and Economic Forecasts, Service Bureau, Public Involvement

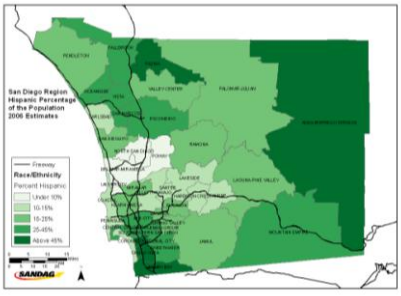
SANDAG Data Background

- **Data available for** 2000, current estimate, forecast to 2030
- **Data comes from** Census, CA Dept. of Finance, Employment Development Dept., County Assessor, local jurisdictions, in-house estimates and forecasts. Typically a 6-month to one-year lag.
- **Database contains:** SD region population: individuals, households, housing units, jobs
  - Demographics: age, race/ethnicity, gender
  - SES Characteristics: occupation, education, housing characteristics, income and poverty, family structure, household characteristics
  - By various geographic units: census tract, city, zip code, SRA, county
- **Caveat:** Not all data available for all geographic areas or for all years.

Example: Hispanic Population by Age



Hispanic Population Concentrations in San Diego Region



SANDAG Data: Highlights

- Online
  - Data: www.sandag.org/datawarehouse
  - Reports: www.sandag.org/profilewarehouse
- Planning & Development
  - Expanding amount of data available at parcel level
  - Incorporating American Community Survey data
- Population Estimates
  - Rate calculations
- Other
  - Grant applications
  - Special tabulations and custom requests available through SANDAG's Service Bureau
- Crime data – Criminal Justice
  - http://www.sandag.org/index.asp?subclassid=79&fuseaction=home.subclasshome
  - ARJIS www.arjis.org

SANDAG Data

Questions???

State-wide Integrated Traffic Records System (SWITRS) Data

Alan Smith, Ph.D., M.P.H.

Emergency Medical Services

SWITRS Background

- **Program established**
  - The Highway Safety Act of 1966
  - Uniform data collection to produce meaningful statistics
- **Types of activities**
  - Monitor injury rates
  - Identify high collision locations
  - Develop traffic safety programs
  - Evaluate the effectiveness of safety measures

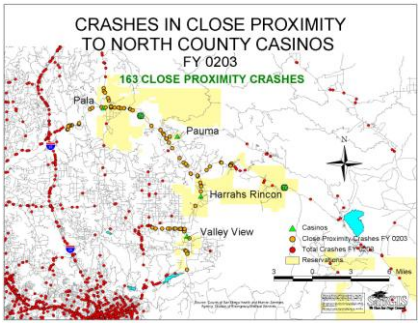
SWITRS Data Background

- **Data available since** July 1995
- **Data comes from** California Highway Patrol, 6 month lag
- **Database contains:**
  - Anyone involved in motor vehicle related injury crash on a public roadway in San Diego County
  - Demographics
  - Event location, environment (road, weather conditions), circumstances (drunk driving, distracted driving), seat belt use
  - Data available for various subject units: victim, party, and crash levels
- **Caveat:** Includes Injury Crashes on Public Roadways. No info on property damage only, or crashes in driveways, parking lots, etc. Also very limited info on injury severity (Complaint of Pain through Death).

Example: Casino-Related Crashes

- Recent opening and expansion of local casinos has been accompanied by an increase in traffic on the rural roads leading to the casinos.
- Looked at data to see if there has also been an increase in crashes on casino roads.
- Large sudden increase in crashes close to casinos following new opening.

SWITRS Map



SWITRS Data: Highlights

- Annual report online:
  - www.SanDiegoCountyEMS.com
    (select Injury Prevention, Epidemiology and Surveillance Page)
- Prevention & Control Programs:
  - Safe Kids San Diego
- Special Research Projects:
  - Graduated Licensing Law Evaluation

SWITRS Data

Questions???

Special Group or Service Databases

Alcohol & Drug Services (ADS) Data

Leslie Ray for Alice McLennan
Alcohol and Drug Services (ADS)

Alcohol & Drug Services Data: Background

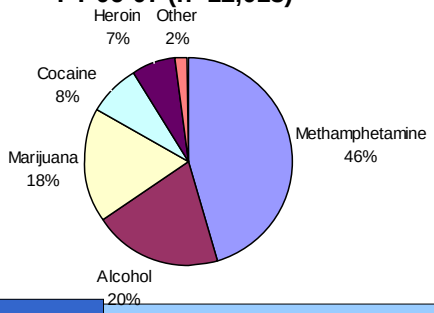
- **Data available since** 1995
- **Data is collected upon** admission, discharge and annual updates from patient follow up. Some data is federally or state mandated. Data is available after 1 month lag, future goal is real time access.
- **Database contains:**
  - All persons who use services at contracted County of San Diego alcohol and drug treatment facilities (voluntary and mandatory)
  - Demographics: age, race/ethnicity, gender, zip code
  - Drugs used, age at first use, number of treatments & more
  - Family, social, legal, medical, psychological

Caveat: Data does not include private treatment facilities.

Example: Drug of Choice

- Methamphetamine use has historically been high in San Diego County
- Reviewed admission data for drug of choice
- Data shows meth is #1 drug of choice among county treatment clients (FY06/07)
- Methamphetamine Strike Force & other groups working on intervention strategies
- County will continue to monitor trends

Primary Drug of Choice, County Alcohol & Drug Treatment Facilities, FY 06-07 (n=12,013)



Alcohol & Drug Services Data: Highlights

- Website:
  - www.sdads.org
- Prevention & Control Programs:
  - Binge drinking
  - Under age drinking across the border
- Surveillance:
  - State & National outcome measures
  - Methamphetamine Use
- Special Research Projects:
  - Treatment outcome measurement of various life domains
- Planning & Priorities:
  - HHSA Regions

Alcohol & Drug Services Data

Questions???

Mental Health Services Data

Leslie Ray for Kathy Anderson, M.P.A.

Quality Improvement, Performance Outcomes Unit

Mental Health Services Data: Background

- **Data available since** 2006
- **Data comes from** monthly input from all outpatient & case management programs
- **Database contains:**
  - Clients eligible for governmental assistance, uninsured, court mandated treatment
  - Demographics including housing
  - Treatment information (diagnosis, medication, outcomes)
- **Caveat:** Data does not include those from private treatment facilities

Example: MHS Performance Improvement Project

- Clients with co-occurring mental health and substance abuse problems were being under identified (SDCo low compared to National survey).
- **Problem: Treatment decisions impacted by failure to identify full scope of clients' issues**
- Medical record reviews
- Administrative and training improvements, including Creation of standardized screening tools for Mental Health Services and Alcohol and Drug Services

Improvements Achieved

By FY 06-07:

- 24% increase in adults with co-occurring disorders documented in InSyst
- 16% increase in client charts indicating a substance abuse diagnosis when warranted
- 11% increase in charts with correlating treatment plan objectives for DDx clients

Mental Health Services Data: Highlights

- Data available upon request.
- Demographic Analysis of Mental Health Services Clients
  - Annual Data Book
  - Annual Fact Sheets
- Gap Analysis
- Client Outcomes
  - Employment, Education, Residential
  - Mental Health Recovery Treatment States
  - Substance Abuse Treatment Stages
- Use of Mental Health Emergency Services
  - Monthly Dashboard Report
- Special Research Projects:
  - Dual Diagnosis
  - Latino Access

Mental Health Services Data

Questions???

Child Welfare Services (CWS) Data

Luis Fernandez

CWS Data & QA Unit

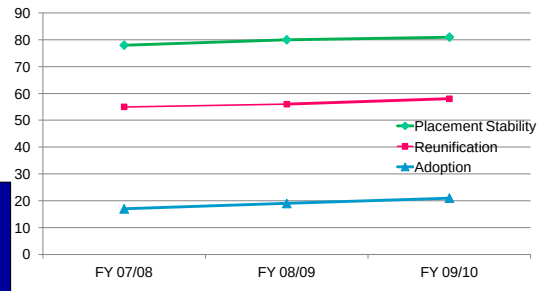
CWS Data: Background

- **Data available since** October 1997. Federally mandated to have statewide data collection system.
- **Data is collected** starting with the suspected child abuse/neglect report
- **Database contains:**
  - All child victims of alleged child abuse and any collaterals associated with the child, including the perpetrator(s) of the abuse/neglect
  - Demographics: age, race/ethnicity, gender, zip code
  - Family, social, legal, medical, psychological information
  - Data on CWS contacts and interactions with the child/family
- **Caveat:** Because the data base contains thousands of fields, it can be challenging to ensure data is accurate and up to date.

Example: System Improvement Plan (SIP)

- Three year plan for improving outcomes for children involved with CWS and their families.
- Data collected for Peer Quality Case Review (PQCR) and County Self Assessment (CSA)
- A few key outcomes are selected for improvement using data gathered from PQCR, CSA, and from community stake holders' input
  - Placement Stability
  - Timely Reunification (within 12 months)
  - Timely Adoption (with in 24 months)

SIP Measures Trend Data



Child Welfare Services Data: Highlights

- Website:
  - http://www.sdcounty.ca.gov/hhsa/programs/cs/child_welfare_services/
  - http://cssr.berkeley.edu/ucb_childwelfare/PIT.aspx
- Prevention & Control Programs:
  - Hotline
  - Assessment Centers
  - Structured Decision Making Tools
- Surveillance:
  - Safe Measures online reporting system
  - System Improvement Plan
  - Child and Family Services Review (CFSR)
- Special Research Projects:
  - list topics
- Planning & Priorities:
  - Effective assessments
  - Family engagement
  - Disproportionality

Child Welfare Services Data

Questions???

Immunization Data

Leslie Ray for Wendy Wang, M.P.H.

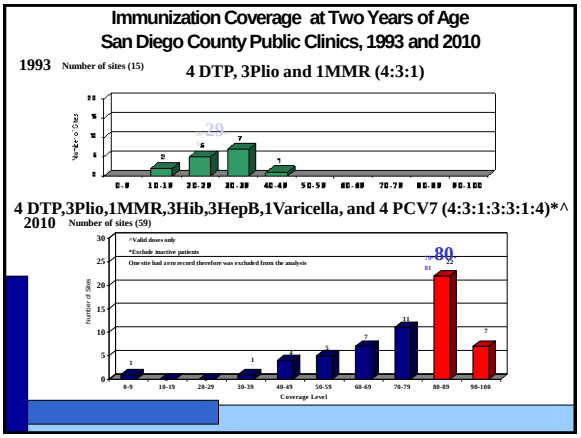
Immunization

Immunization Data: Background

- **Data available since** 1990-2010, depending on source
- **Data comes from** surveys, medical charts, school records, immunization registry, various lag time for processing
- **Database contains:**
  - Who: depends upon dataset and may include:
    - Cases (reportable vaccine preventable diseases)
    - Sample of San Diego residents, or kindergarteners
    - Clients received immunization services at Public Health Clinics, Community Health Clinics and private practices cross County
  - Demographics: age, race/ethnicity, gender, education, insurance
  - Disease histories, Vaccine histories, Vaccine attitudes
- **Caveat:** sample bias, limited information at zip code level

Example: Vaccination Coverage by Age 2

- Low immunization rates at Community Health Centers (CHC)
- Chart review to find out the causes
- Data shows high rate of drop off
- Reminder/recall to bring family back
- County reviewed latest rates
- Rates going up !



Immunization Data: Highlights

- Online:
  - www.sdiz.org
- Prevention & Control Programs:
  - Pertussis awareness campaign in medical communities
  - New Tdap requirement for 7th-12th grades
- Surveillance:
  - Pertussis outbreak
  - Vaccine adverse event report system
- Special Research Projects:
  - Extend Flu Vaccination into Late Flu Season
  - Adolescent Vaccines and Clinical Preventive Services
- Planning & Priorities in Regions/County:
  - Health equity, immunization cross life span

Immunization Data

Questions???

HIV Counseling and Testing Data

Samantha Tweeten for Lorri Freitas, M.P.H.

HIV/AIDS Epidemiology/ Community Epidemiology

HIV Testing Data: Background

- **Data available since** 1990
- **Data comes from** local county facilities that provide testing, 4-6 month lag, reported annually
- **Database:** Includes occurrence in SD County, most are SD County residents
  - Anyone seeking HIV testing at County or County-contracted test sites (minimum age 12-13 yrs old)
  - Demographic: age, gender, race/ethnicity, zip code (limited) of residence
  - Behavioral: sexual orientation, number of sexual partners, gender of partners, sexual behaviors
  - Testing: reason for testing, number of prior HIV tests, test type, test result
- **Caveat:** Sensitive data – this may limit data availability for less than county-wide data, particularly zip code analysis.

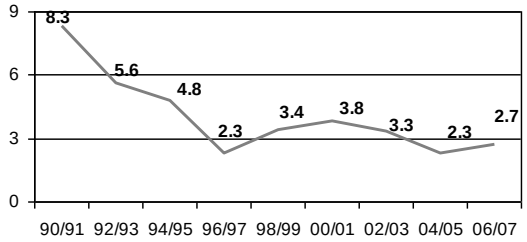
Example: Young MSM

- Increase in HIV infection rates starting 2001; were young MSM (men who have sex with men) affected here as in other metropolitan areas?
- Looked at data for MSM by age group
- The infection rate for young MSM in SD did not increase as it had in other metropolitan areas

HIV Anonymous Testing

Rate per 100 MSM Ages 12-24 Testing HIV+

San Diego County, 90/91-06/07



HIV Testing Data: Highlights

- Annual report online:
  - www.sdhivaids.org (select Reports and Statistics)
- Prevention & Control Programs:
  - Outreach to high risk groups (at clubs, community events, support groups)
- Surveillance:
  - High risk populations
  - Changes in modes of transmission
  - Service patterns
- Special Research Projects:
  - African American Action Plan
  - Latino Action Plan
- Planning & Priorities in Regions/County:
  - South and Central Region
  - Hispanic and African American men (mostly MSM)

HIV Testing Data

Questions???

HIV/AIDS Reporting System (HARS) Data

Samantha Tweeten, Ph.D., M.P.H.

HIV/AIDS Epidemiology/ Community Epidemiology

HIV/AIDS Data: Background

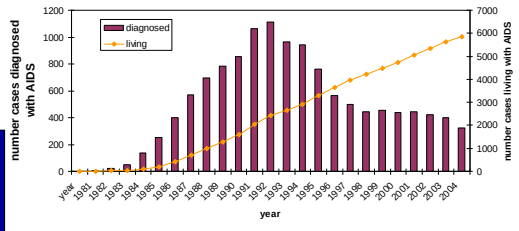
- AIDS data available since 1981
- State mandated reporting
  - Mandatory reporting from providers and labs
  - Up to 1 month delay possible but…
    - Cases continue to be reported long after diagnosis
- Cases include:
  - Any San Diego County resident diagnosed in San Diego County. San Diego County residents diagnosed elsewhere may be included
    - All HIV cases reported after 4/17/06
    - All AIDS cases reported after 1981
  - Demographics, region or zip code (limited) of residence
  - Risk group/Patient history
  - Laboratory data
  - Opportunistic infection data
- Recent changes in HIV reporting may delay data availability
  - AIDS data unaffected

Example: Epidemiologic Profile

- **Data Request:**
  - HSHB (HIV, STD & Hepatitis Branch) requests an epidemiologic profile of the epidemic in San Diego County
- **Product:**
  - Report produced including HHSA regions, demographics, mode of transmission, etc. to fully describe the epidemic in San Diego County
- **Result:**
  - Epi Profile goes into the HSHB Comprehensive Plan
    - Used to determine where care and services should be concentrated

HIV/AIDS Data: Example

Living and Diagnosed AIDS Cases



HIV/AIDS Data: Highlights

- Annual report online:
  - www.sdhivaids.org
- Provide data to internal and external customers
  - Community care providers, HIV Planning Council
  - For grant proposals, community planning, etc.
- Surveillance
  - Determining increases in specific groups
- Special Reports
  - AIDS in Hispanics, AIDS in Women, etc.

HIV/AIDS Reporting Data

Questions???

Sexually Transmitted Disease (STD) Data

Marjorie Lee, M.P.H.

HIV/STD/Hepatitis Branch

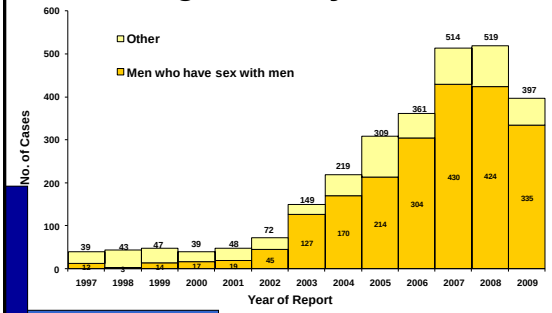
STD Data: Background

- **Data available since** 1990 for chlamydia & gonorrhea, 1992 for syphilis
- **Data comes from** state mandated reporting by providers and laboratories. Data available 4 months after end of calendar year
- **Database contains:** All reported cases of syphilis, gonorrhea and chlamydia from providers and laboratories in San Diego County
  - Number of cases
  - Demographics: age, gender, race/ethnicity, zip code
- **Caveat:** Data on race/ethnicity and zip code of residence are often missing

Example: Repeat Syphilis Among MSM

- Analyzed syphilis surveillance data to determine factors associated with repeat syphilis (within 2 years) among men who have sex with men (MSM) in San Diego County
- Among 614 MSM with early syphilis during January 2004-June 2007, 74 (11.7%; 95% CI, 9.3% - 14.4%) had repeat syphilis within two years.
- HIV-infected MSM were more likely to have repeat syphilis (odds ratio 1.9, 95% CI, 1.1, 3.4).
- "We All Test" campaign to encourage MSM to sign up online to receive syphilis testing reminders via text and/or email every 3-6 months
  - Incentive to register initially given to HIV-infected MSM diagnosed with early syphilis
  - Due to decline in syphilis cases, now have sufficient resources to offer incentives to all MSM diagnosed with early syphilis

Early Syphilis by Year San Diego County,1997–2009



STD Data: Highlights

- Monthly and quarterly reports online:
  - www.STDSanDiego.com
    select Reports and Statistics)
- Prevention & Control Programs:
  - STD Community Interventions Program (SCIP)
- Surveillance:
  - Monitoring of STD rates (CT, GC and syphilis) overall and for specific groups
  - Enhanced Gonorrhea Surveillance
- Special Research Projects:
  - Evaluation of program to re-screen persons who test positive for CT and GC
- Planning & Priorities in Regions/County:
  - Location of STD clinics – based on STD rates

STD Data

Questions???

Tuberculosis (TB) Case Database

Leslie Ray for Marisa Moore, M.D., M.P.H.

Tuberculosis Control

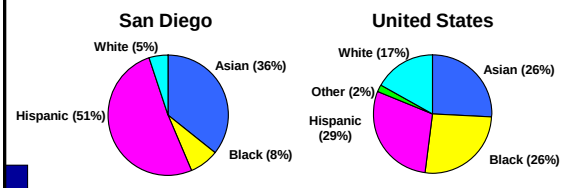
TB Data: Background

- **Data available since** 1993
- **Data comes from**
  - Initially, mandatory report by providers and laboratories
  - Complete case report based on medical records and patient interview
  - Case confirmed using CDC surveillance case definition for TB
- **Database contains:**
  - New confirmed cases of TB in San Diego County
  - Demographics
  - Clinical presentation and drug resistance
  - Risk factors (e.g., drug use, homelessness)
  - Treatment outcome
- **Caveats:**
  - Does not include non-reported cases of TB
  - Small numbers may limit reporting of data less than county level

Example: TB

- Case reporting depends on access to medical care
- Case data: >50% of TB cases occur in Hispanics
- Developed pilot targeted media outreach project
- High yield case finding activity
- Incorporated media campaign into program routine

Reported TB Cases Race/Ethnicity San Diego County vs. U.S., 2007



*All races are non-Hispanic.
**Other includes American Indian/Alaska Native, Native Hawaiian/Other Pacific Islander and persons reporting two or more races.
U.S. data for 2007: provisional

TB Data: Highlights

- Fact sheet, trend tables, annual report online:
  - www.sandiegotbcontrol.org
- Prevention & Control Programs:
  - Evaluate success of control efforts
  - Plan targeted control and prevention interventions
- Surveillance:
  - TB case rate decreasing, 2003-2007
  - More than 50% of cases occur in Hispanics
- Special Research Projects:
  - Frequent participant in multi-center studies with CDC and state
  - Recent studies include
    - Missed opportunities for prevention in children
    - Epidemiology of TB among foreign-born persons
- Planning & Priorities in Regions/County:
  - Staffing redesign in 2007
  - Education efforts to high-risk populations and facilities

TB Data

Questions???

Childhood Lead Poisoning Prevention Program (CLPPP) Lead Data

Lacey Hicks, M.P.H.

Community Epidemiology

Lead Data: Background

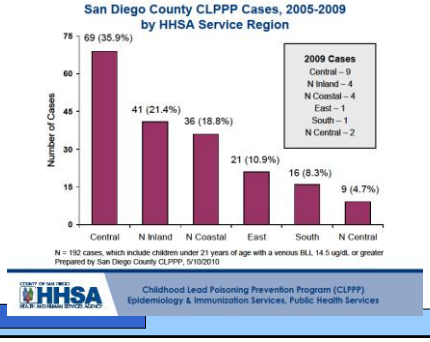
- **Data available since** 1992
- **Data comes from:**
  - Mandatory laboratory reporting to state. Data returned to local CLPPP programs the month after receipt
  - RASSCLE database which contains managed case data
- **Database contains:**
  - All San Diego County children under 21 years of age who have been tested for blood lead levels
  - Demographics including age, gender, race/ethnicity, address*
  - Blood lead levels, sample type, healthcare provider
  - Possible sources of exposure (for managed cases)
- **Caveats:** Reporting is NOT complete, i.e. not all children are tested for lead poisoning. Laboratory reporting is not standardized.

**addresses are not available to public*

Example: Distribution of Managed Lead Poisoned Cases by Region

- Highest number of lead poisoned children live in poor neighborhoods with old housing in need of repair (peeling paint, etc)
- Looked at geographical distribution of 2005-2009 managed cases in San Diego County
- Data show that 69 (35.9%) managed cases live in Central Region
- Target Central Region for preventive and educational outreach
- Continue to follow latest managed case stats

Number of New San Diego County Lead Cases, by Region, 2005-2009



Lead Data: Highlights

- Online:
  - Local: http://www.sdcounty.ca.gov/hhsa/programs/phs/child_lead_poisoning_prevention_program/clppp_surveillance_graphs_maps_reports.html
  - CA State: http://www.dhs.ca.gov/childlead/
- Prevention & Control Programs:
  - Educational outreach to low income families with young children
  - Healthcare provider education and training
  - Reduction of environmental lead hazards programs
- Surveillance:
  - Quantity and levels of lead tests ordered each month
  - Follow which healthcare providers order lead tests
  - Follow possible sources of lead exposure trends
- Special Research Projects:
  - Early Prevention Program (EPP): Home visitation to families with children whose blood lead levels are below State case definition
- Planning & Priorities in Regions/County:
  - CLPPP program activities are based on feedback from lead data

Lead Data

Questions???

Reportable Disease Data

Jeff Johnson, M.P.H.

Community Epidemiology

Reportable Disease Data: Background

- **Data available since** 1993 (similar data since 1987 in a different format**)**
- **Data comes from** mandatory reporting by providers and laboratories
  - Submitted as the case is diagnosed or up to 7 days after diagnosis depending on the diagnosis
  - Submitted directly to Public Health via phone, fax, mail or electronically using web-based reporting or automatic electronic laboratory reporting.
- **Database contains**
  - Any individual who has been diagnosed with a reportable disease in San Diego County and whose healthcare provider or lab submitted a Confidential Morbidity Report (CMR) to Public Health
  - Reportable diseases include infectious diseases (i.e. E.coli, measles), and poisoning from marine toxins (ciguatera, shellfish poisoning)

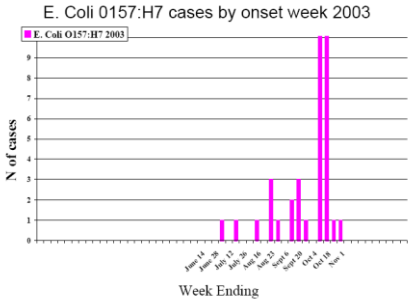
Reportable Disease Data: Background (continued)

- **Database contains**
  - Demographics: age, gender, race/ethnicity, zip code of residence
  - Disease, risk factors, date of diagnosis, lab test results
  - STD and TB reports are handled by those respective Branches within Public Health Services
- **Caveat:** Not all reportable diseases are diagnosed or reported, the patient must visit a health care provider and the provider must submit a Confidential Morbidity Report to be included in dataset. Noninfectious reportable diseases and conditions are reported on CMR, but not maintained by HHSA in this dataset.

Example: *E coli* O157:H7 Outbreak

- 5 cases were reported to Community Epidemiology over a 3 day period
- The number of cases was well in excess of expected cases for a single week. Community Epidemiology began a foodborne outbreak investigation in conjunction with California Department of Health Services (CADHS).
- Investigation revealed an association with eating at a local restaurant. Epidemiology contacted Department of Environmental Health Food and Housing Branch. Implicated food items narrowed to lettuce used in several salads. Restaurant stopped serving lettuce and changed vendors. State began traceback investigation to determine source of contamination.
- In San Diego County close to 40 people were sickened. No cases occurred after the Restaurant stopped serving the implicated lettuce.

Reportable Disease Data: E. Coli O157:H7 outbreak 2003



Reportable Disease Data: Highlights

- Annual tables and reports online:
  - www.sdepi.org
  (select Epidemiology – Statistics and Reports)
- Prevention & Control Programs:
  - Hand Hygiene for preschools
  - Disease-specific fact sheets focusing on prevention and treatment
- Surveillance:
  - Enteric Disease case rates higher than previous years
- Special Research Projects:
  - 2004 Community-Wide Antibiogram
- Planning & Priorities in Regions/County:
  - Implement electronic reporting with healthcare providers and labs
  - Collaborate with state and federal officials on changes in existing reporting regulations

Reportable Disease Data

Questions???

Population-based Databases

Birth Data

Sutida (Nid) Jariangprasert, M.P.H.

Maternal, Child and Family Health Services

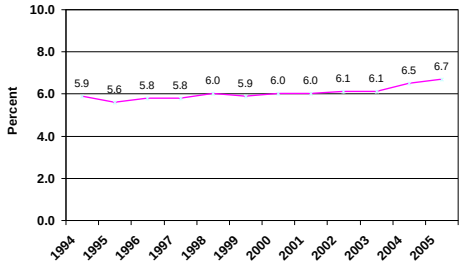
Birth Data: Background

- **Data available since:** 1990
- **Data source:** State law mandates registration of births. Data are available 6-9 months after end of calendar year.
- **Database contains:**
  - Births to county residents (including occurrence outside the county) and births that occurred in the county
  - Parents' demographics: age, race/ethnicity, education, marital status
  - Fertility rate, teen births, prenatal care, preterm births, low birth weight, method of delivery, plurality
- **Caveat:** only live births included (not all pregnancies)

Example: Monitoring Low Birth Weight

- MCFHS works with women, health care providers and other public health groups to improve birth outcomes
- Medical science has advanced
- Is low birth weight decreasing?

Low Birth Weight
San Diego County Residents



Fetal Death Data

Sutida (Nid) Jariangprasert, M.P.H.
Maternal, Child and Family Health Services

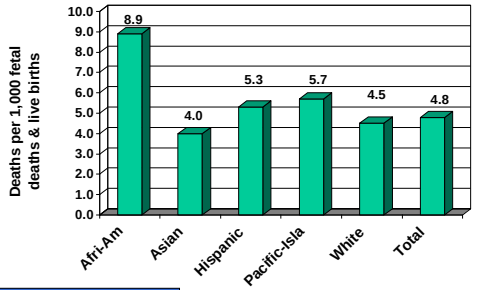
Fetal Death Data: Background

- **Data available since:** 1989
- **Data source:** State law mandates registration of fetal deaths. Data are available about 9 months after end of calendar year
- **Database contains:**
  - All deaths prior to birth (beyond 20th week of gestation)
  - Fetal deaths among county residents (including occurrence outside the county) and deaths that occurred in the county
  - Parents' demographics: age, race/ethnicity, education
  - Fetal mortality, prenatal care, delivery method, length of gestation, birthweight, gender, cause of death
- **Caveat:** Reporting is not complete

Example:
Fetal Deaths

- Race/ethnic disparities in many health issues
- Is there a disparity in fetal deaths?
- Are there certain groups MCFHS should focus intervention efforts on?

Fetal Mortality by Race/Ethnicity
San Diego County Residence, 2003-05



Infant Death Data

Sutida (Nid) Jariangprasert, M.P.H.
Maternal, Child and Family Health Services

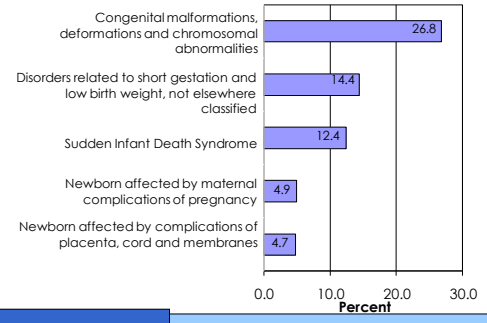
Infant Death Data: Background

- **Data available since** 1990
- **Data source:** State law mandates registration of deaths. Data are available 9-12 months after end of calendar year.
- **Database contains:**
  - Deaths among county residents (including occurrence outside the county) and deaths that occurred in the county
  - Infants' demographics: age, race/ethnicity, gender
  - Topic Specific: infant mortality (including neonatal, postneonatal), cause of death
- **Caveat:** Misreporting of information, e.g. race/ethnicity.

Example: Infant Mortality

- Do our prevention efforts match what is happening in actuality?
- It would be useful to know: what are the leading causes of death?
- Can we reduce the risk of dying from any of the causes?

Leading Causes of Infant Death, 2002-2004, San Diego County Residence



MCFHS Data – Highlights

- **Annual tables online:**
  - http://www.sdcounty.ca.gov/hhsa/programs/phs/maternal_child_family_health_services/index.html
    (select MCFHS - Statistics)
- **Prevention & Control Programs:**
  - Perinatal Care Network (PCN)
  - San Diego Kids Health Assurance Network (SD-KHAN)
  - Black Infant Health (BIH) Program
- **Special Research Projects:**
  - Pregnancy Passport pilot project

MCFHS Data
(births, fetal and infant mortality)

Questions???

– BREAK –

- 10 minute break -

Death Certificate Data

Jeff Johnson, M.P.H.
Community Epidemiology

Death Data: Background

- **Data available since** 1989 (through 2005 currently)
- **Data comes from** mandatory reporting of death certificates
  - Registered at county level then forwarded to state
  - Data file received from CA DHS after processing lag of 1-2 years
- **Caveat:** Only underlying cause of death is available, not additional contributing causes of death

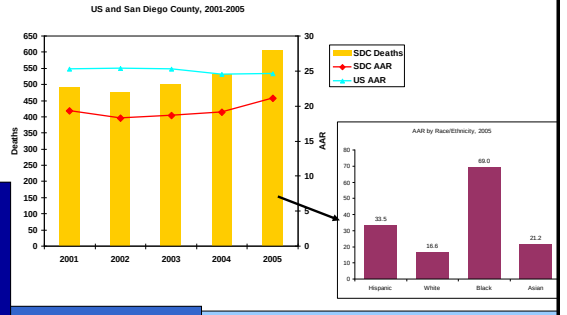
Death Data: Background

- **Database contains:**
  - All recorded deaths of
    - San Diego County residents
    - Residents of other locales whose death occurred in San Diego County
  - Available variables
    - Demographics: age, race/ethnicity, gender, marital status, education
    - Geography: zip code, city, state of residence
    - Underlying cause of death, date of death, place of death

Example: Diabetes

- Nationwide disease burden associated with increasing diabetes prevalence
- Looked at mortality data to see how serious a problem diabetes is in San Diego County:
  - diabetes deaths in San Diego County increased to 604 in 2005 from 491 in 2001
  - 7th leading cause of death
  - Age-adjusted rates showed racial/ethnic disparities
- Local community groups use the data to help design programs promoting diabetes prevention and management in affected communities
- County continues to monitor diabetes-related death rates

Diabetes Deaths, 2001-2005: Counts and Age-Adjusted Rates* (AAR)



Death Data: Highlights

- **Annual tables online:**
  - www.sdepi.org
  (select Epidemiology – Statistics and Reports)
- **Surveillance:**
  - Assess trends in mortality
  - Track deaths attributable to specific causes (including diseases, conditions, accidents, etc.)
- **Prevention & Control Programs:**
  - Determine leading causes of death county-wide and for specific regions and population groups
- **Special Research Projects:**
  - Measure health disparities
- **Planning & Priorities in Regions/County:**
  - Assess the health of the community and measure health outcomes

Death Data

Questions???

PreHospital Database

Alan Smith for Barbara Stepanski, M.P.H.

Emergency Medical Services (EMS)

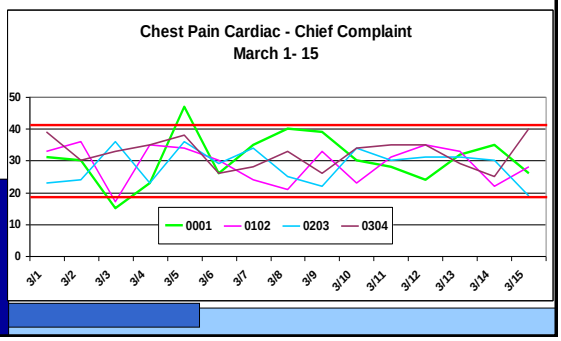
Prehospital Data Background

- **Data available since** 1997
- **Data comes from** mandatory reporting County EMS system. Events are reported real time, detail event information several year lag.
- **Database contains**:
  - Prehospital database is population based
  - All patients responded to by Emergency Medical Technicians (EMTs) and/or Paramedics via the 911 system in San Diego County, by zip code of incident
  - Patient information
  - Chief complaint
  - Treatment information
- **Caveat:** Several years lag time for detailed data, which includes zip code.

Example: Surveillance

- Normal surveillance showed spike in cardiac chief complaints
- Timing: spikes occurred just after school shootings in East County
- Further investigation showed no cardiac peak after "natural" disasters (i.e. fires)
- Future: consider needs/plan for post-traumatic effects of non-natural trauma situation

Surveillance: Cardiac Chief Complaint



Prehospital Data: Highlights

- Annual report online:
  - www.SanDiegoCountyEMS.com
    (select Injury Prevention, Epidemiology and Surveillance Page)
- Prevention & Control Programs:
  - Helmet law
  - Child restraint use study
- Surveillance, Regulatory oversight & quality assurance:
  - Heat related incidents
  - Lasix use in prehospital setting
- Special Research Projects:
  - 911 responses for underage alcohol/substance abuse
- Planning & Priorities in Regions/County:
  - Central Region – high rate of pedestrian injuries

Prehospital Data

Questions???

Emergency Department (ED) Discharge Data

Holly Shipp, M.P.H.

Emergency Medical Services (EMS)

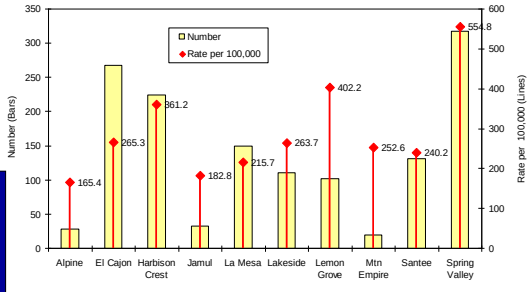
ED Data: Background

- **Data available since** July 2005 (new local database)
- **Data source:** voluntarily submitted quarterly by participating civilian hospitals, representing 97% of all ED discharges. ~4 month lag for processing.
- **Database contains**: all patients who were treated and discharged from participating EDs in San Diego County
  - Demographic variables: age, race/ethnicity, gender, zip code of residence
  - Service date, patient disposition, expected source of payment
  - Principal & other diagnosis, E-code (mechanism of injury)
- **Caveat:** Does not include patients admitted to hospital from the ED (i.e. most severe cases of illness or injury)

Example: Asthma, HHSA East Region

- A local collaborative is beginning to develop strategies to reduce asthma in the HHSA East Region
- Need to begin by establishing baseline surveillance of asthma within each community
  - Highest numbers in Spring Valley & El Cajon, highest rates in Spring Valley & Lemon Grove
  - Difference apparent by age group
    - Highest rate of ED discharge for asthma among children
    - As a comparison, highest rate of hospitalization for asthma among seniors
- Next, asthma triggers and potential contributing factors can be evaluated within each community

Number and Rate of Asthma ED Discharges Among HHSA East Region Residents by Community of Residence, 2006



ED Data: Highlights

- Reports online:
  - www.sdchip.org
  - www.SanDiegoCountyEMS.com
    (select Injury Prevention, Epidemiology and Surveillance Page)
- Prevention & Control Programs:
  - Elderly Fall Prevention
  - Childhood Unintentional Injury Prevention
- Surveillance:
  - Diabetes, Asthma, Mental Illness, Substance Use/Abuse
- Special Research Projects:
  - Access to Care for Children
  - Use of the ED for dental-related diagnoses
- Planning & Priorities in Regions/County:
  - San Diego County: ED use by the uninsured

ED Data

Questions???

Trauma Registry

Alan Smith, Ph.D., M.P.H.
Emergency Medical Services

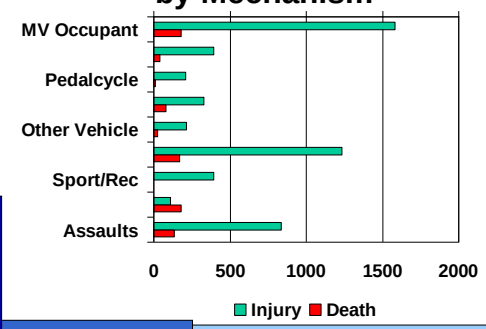
Trauma Data: Background

- **Data available since** 1985
- **Data comes from** State mandated reporting for trauma facilities, 3 month time lag for reporting.
- **Database contains:**
  - Patients seen at San Diego County Trauma Centers
  - Demographics
  - Zip code of residence, possible zip code of occurrence
  - Event date/time, limited prehospital information, diagnosis, injury E-code, treatment/surgery, survival outcome
- **Caveat:** Highly sensitive data, research requires clearance from hospital IRBs and Medical Audit Committee

Example: Leading Causes of Injury

- Annual Trauma Report examined leading causes of injury and death due to trauma
- Motor vehicle occupant crashes and falls are the leading causes of injury; joined by suicide as a leading cause of traumatic death
- Community based organizations used this information as a springboard to initiate programs to prevent specific types of injury (e.g., elderly falls, suicide)

Trauma System Injuries and Deaths by Mechanism



Trauma Data: Highlights

- Annual report online:
  - www.SanDiegoCountyEMS.com
    (select Injury Prevention, Epidemiology and Surveillance)
- Prevention & Control Programs:
  - Safe Kids San Diego
- Surveillance:
  - Trauma System quality improvement

Trauma Data

Questions???

Hospital Patient Discharge Data

Lacey Hicks, M.P.H.

Community Epidemiology

Hospital Discharge Data: Background

- **Data available since** 1997 *(through 2008 currently)*
- **Data come from** mandatory reporting to California Office of Statewide Health Planning and Development (OSHPD)
  - Database received from OSHPD after processing lag of 1-2 years
- **Database contains:**
  - Each inpatient discharged from a California licensed acute care hospital in San Diego County
  - Demographics: age, race/ethnicity, gender
  - Geography: zip code of residence
  - Clinical information: diagnosis (ICD-9-CM), injury (E-Codes), length of stay, disposition of patient, total charges, expected source of payment
- **Caveats:** Includes only patients admitted to a hospital licensed by California. 1-2 year lag time for data.

Example: Diabetes Hospitalizations

- HHSA Strategic Plan for FY 2004 – 2009: To promote wellness and self-sufficiency, reduce diabetes-related deaths in all communities
- Look at diabetes-related hospital discharge data to help determine where to focus intervention efforts toward reducing life-threatening diabetes
- Overall, diabetes hospital discharge rates have increased each year, except 2008
- Review rates by region and ethnicity

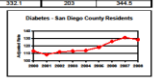
Diabetes Hospitalizations Among San Diego County Residents, 2006-2008

Diabetes Hospital Discharges Among San Diego County Residents 2006-2008
By Region, Gender, Race/Ethnicity, and Age Group

	2006		2007		2008	
	Hospital Discharges	Adjusted Rate	Hospital Discharges	Adjusted Rate	Hospital Discharges	Adjusted Rate
SAN DIEGO COUNTY	3,729	126.0	3,989	131.0	3,972	126.6
HHSA Service Region						
N. Coastal	468	81.6	456	88.9	492	76.4
N. Central	407	87.3	420	89.0	413	86.9
Central	940	263.0	934	216.0	922	209.4
South	847	207.9	850	204.5	831	195.8
East	763	183.7	795	188.7	816	187.9
N. Inland	526	93.0	536	92.3	514	87.8
Gender						
Male	2,332	154.3	2,255	155.8	2,226	150.5
Female	1,639	104.9	1,734	109.1	1,746	105.1
Race/Ethnicity						
White	1778	100.8	1773	99.7	1756	98.4
Black	394	292.8	486	345.1	483	331.2
Hispanic	1188	226.3	1325	236.3	1385	231.5
Asian/Pacific Islander	239	80.3	256	85.0	238	74.9
Native American/Other	85	150	101	138.5	115	114.5
Age Groups (years)	Hospital Discharges	Age-Specific Rate	Hospital Discharges	Age-Specific Rate	Hospital Discharges	Age-Specific Rate
0-4	18	8.6	18	7.9	15	6.9
5-14	133	32.7	134	33.0	141	34.6
15-24	259	44.5	262	45.0	266	45.1
25-34	279	81.4	316	91.2	267	76.1
35-44	467	195.8	504	198.1	466	187.1
45-54	712	284.1	812	308.4	736	268.2
55-64	754	394.1	814	418.6	799	388.2
65-74	673	348.3	630	322.7	647	314.5
75-84	468	368.1	473	373.1	485	360.6
85+	183	314.1	184	333.7	203	344.5

Diabetes includes hospitalizations with a principal diagnosis ICD-9-CM code of 250
All rates are per 100,000 population and are adjusted to 2000 Standard U.S. Population
Sources: California Office of Statewide Health Planning & Development (OSHPD) Hospital Discharge Data 2006-2008; SANDAG January 1 population estimates 2006-2008 (rev. 10/2009)

Prepared by Epidemiology & Immunization Services 3/2/2010



Hospital Discharge Data: Highlights

- Annual Tables and Reports Online:
  - Local: www.sdepi.org, (select Epidemiology – Statistics and Reports)
  - California State: http://www.oshpd.ca.gov/
- Prevention & Control Programs:
  - Determine leading causes of hospitalizations county-wide and for specific regions and population groups
- Surveillance:
  - Track hospitalizations attributable to specific causes (including diseases, conditions , accidents, etc.)
  - Assess trends in hospitalizations
- Special Projects:
  - Measure health disparities
- Planning & Priorities in Regions/County:
  - Estimate disease/condition burden on community through total charges, length of stay of hospitalizations, and expected source of payment

Hospital Discharge Data

Questions???

Medical Examiner (ME) Data

Alan Smith, Ph.D., M.P.H.
Emergency Medical Services

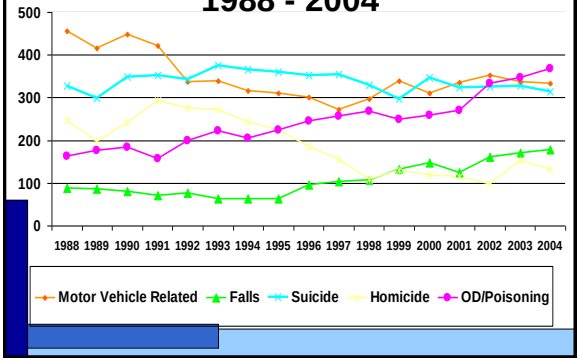
ME Data: Background

- **Data available since** 1988
- **Data comes from** ME office after case closes (6 months)
- **Database contains:** Non natural deaths occurring in San Diego County
  - Demographics
  - Zip code of residence, Event location
  - Cause of death, investigative report, autopsy, toxicology, pathology, medical/surgical history
- **Caveat:** Does not include SD county residents who died elsewhere, but does include residents of other areas who died here. Law enforcement may seal records still under investigation, sometimes for several years.

Example: Cause of Non-Natural Death Trends

- ME noticed large number of suicides
- Reviewed data to see if it supports the "anecdotal trend"
- Suicide was the leading cause of non-natural death from 1992 through 1998
- CHIP formed a committee to focus on suicide prevention
- Increased resources for suicide prevention

ME Data: Cause of Death by Year, 1988 - 2004



ME Data: Highlights

- Annual reports online, Trauma & Suicide:
  - www.SanDiegoCountyEMS.com
    (select Injury Prevention, Epidemiology and Surveillance Page)
- Prevention & Control Programs:
  - CHIP Suicide Prevention workgroup
- Surveillance:
  - Trauma-related deaths – bimonthly report to MAC
- Special Research Projects:
  - Motor Vehicle Occupant death rate change following primary seat belt law
  - Food-related asphyxiation deaths in adults
- Planning & Priorities in Regions/County:
  - Central Region – high rate of suicide

Medical Examiner Data

Questions???

Survey Databases

California Health Interview Survey (CHIS) Data

Leslie Ray for Deirdre Browner, M.P.H.

Community Epidemiology

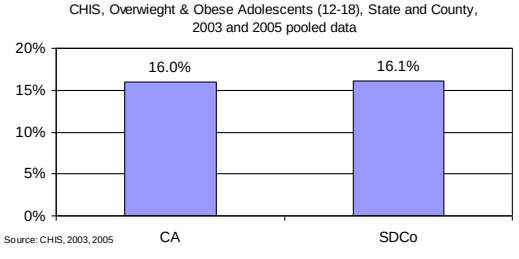
CHIS Data: Background

- **Data available for** 2001, 2003 at county level only. Since 2005 contains some regional level data.
- **Data comes from** UCLA Center for Health Policy Research. The data are distributed after final processing is completed (approximately one year after the end of the survey)
- **Survey:** CHIS uses stratified random sampling techniques to create estimates for the County
  - Demographics, housing, employment, health insurance, public program eligibility
  - Health Behaviors: diet, exercise, access/use of health care, health screenings
  - Health Status: height, weight, health conditions, general health, dental health
- **Caveat:** Not all questions appear in every year of the survey and data can be coded differently between survey years leading to limited comparability

Example: Childhood Obesity

- Several community leaders express a concern about rising rates of Childhood Obesity
- CHIS data for BMI for adolescents (12-18) shows the baseline in the percentage that are at or above the 95th percentile for age and gender for 2003 and 2005 pooled data
- The Childhood Obesity Initiative was developed as a public-private partnership with the County, CHIP, and other community partners
- County will continue to monitor adolescent overweight and obesity

CHIS Data: Childhood Obesity



CHIS Data: Highlights

- Data online:
  - Query system: www.chis.ucla.edu
  - Selected data tables: www.SDHealthStatistics.com
- An over-sample of San Diego County provides HHSA regional level data, beginning in 2005 survey
- First 5 San Diego used CHIS health insurance and oral health data in developing new, local requests for proposals. First 5 San Diego used CHIS data in its planning to allocate $6 million for efforts to enroll uninsured eligible children in existing programs.
- The National Latino Research Center at Cal State San Marcos used data from CHIS in its publication, Health Disparities in San Diego County: Immigration and Citizenship.
- CHIS data was used in the Asian and Pacific Islander American Case Study: The Diabetic Vietnamese Population of San Diego County.
- SD Community Health Improvement Partners Report "Charting the Course", 2004

CHIS Data

Questions???

Community Health Statistics Unit

Julie Cooke, M.P.H.

Summary

Today you've heard about some of the health data available

Now:

- How to get data
- Who to contact

Next week you'll learn about using data:

- Determining what you need
- How to ask for data
- How to present your data

Role of The Community Health Statistics (CHS) Unit

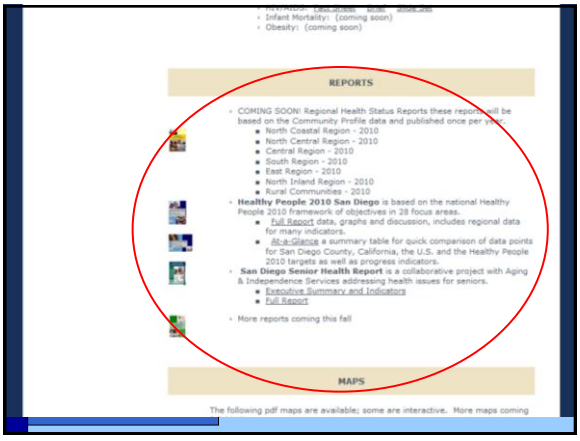
- "One Stop Shop" for health data
- Data Requests (619) 285-6479
- CHS Unit Website: www.SDHealthStatistics.com

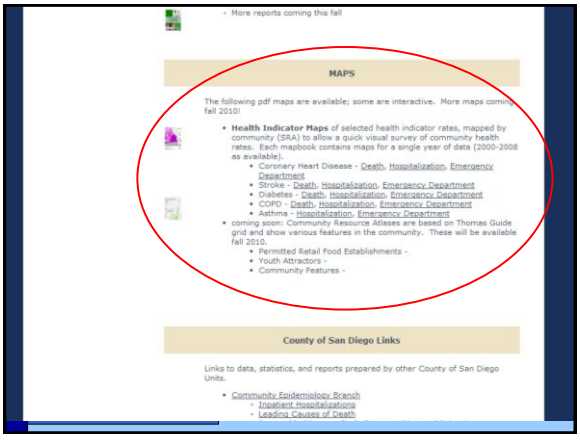
Examples of Data Requests

- Cancer, diabetes, heart disease and HIV rates for a regional hospital to prioritize services to better serve community needs (Online Community Profiles)
- For youth, the number of deaths, suicides, ADS usage, teen births and firearm injuries, for specific zip codes, to develop an intervention for at risk youth (EMS, ADS and Death data)
- Number of women in San Diego County who are mail ordered or brokered brides, for coursework and potential future funding (federal report)

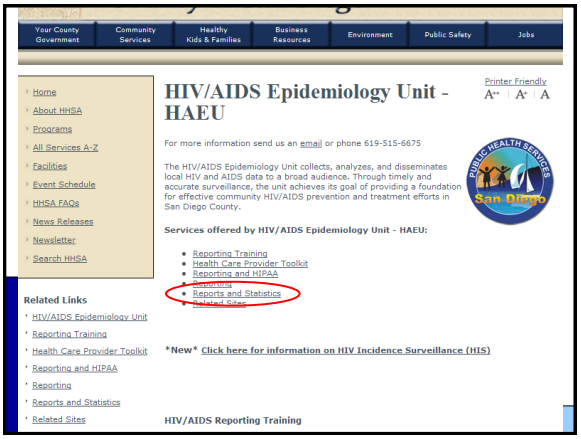
Website: www.SDHealthStatistics.com

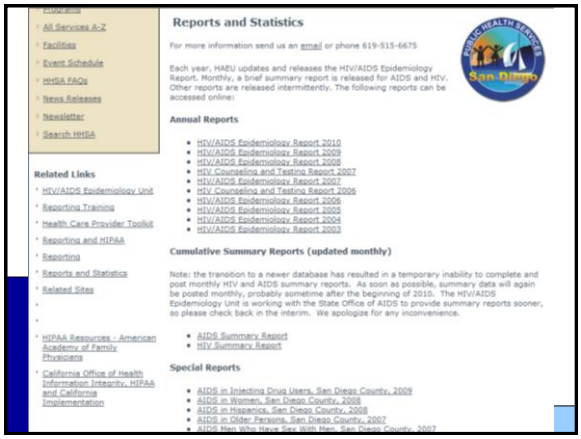
- San Diego County Community Profile
  - latest Health & Demographic Data
  - All Regions and Subregional Area data included
- Other CHSU reports and data tools
- Links to Public Health Services Data Reports
- Links to Other Important Data Sources
  - Local
  - State
  - National





Links to statistics, data & reports, prepared by other County units



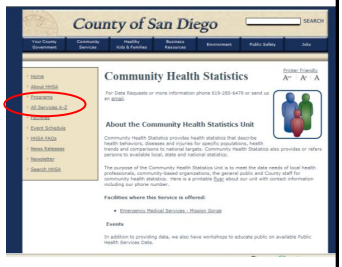


Data Requests

- Website: www.sdhealthstatistics.com
  - Hotline: (619) 285-6479
  - Send an email

Navigating County of San Diego Web

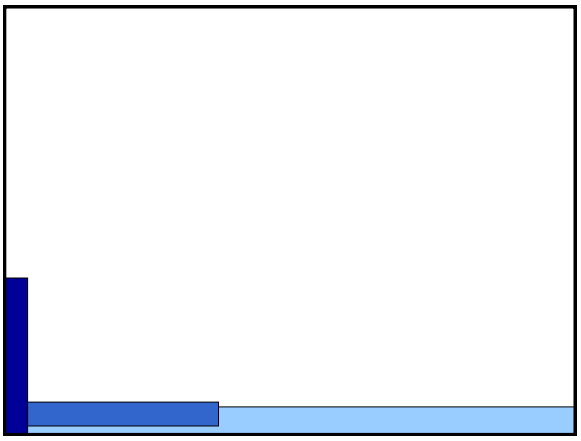
- Go to your favorite, easy to remember County site
  - i.e. www.sdhealthstatistics.com
- Use left navigation bar to find other department webpages
- "All Services A-Z"



Learn to Use Public Health Data
Preview of Workshop II

- Data Measures
  - Analyzing data
  - calculating rates
  - Interpretation
  - Meaning
  - Presenting Data/Results
- Outcome Measures
- Program Evaluation
- Special Considerations
  - Choosing measures
  - Geographic units
  - Limitations
  - Issue, small numbers
  - Footnotes
  - Interpretation
- Asking questions & finding data

Questions?

- Evaluations – please fill out!
- Questions???

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